furniture. These objects are not numerous and reflect the primitive life led by the Tuareg.

On the left side of the tent is generally found the goatskin water bag, hung on two wooden stakes placed in a V-shape. An old piece of cloth often covers it to protect it from the sun. The waterskin is often empty, for the Tuareg are not very farsighted. When there is water, they drink; when /229/ they are out of it, they stay there waiting a half day until the Iklan get back from the well.

Fig. 28.
Tent shovel.

When a traveler passes by, he is most generally assailed with demands for water, while he himself often hoped to find some in the camp.

In front of the door and close to all the tents is an enormous wooden mortar and its pestle, in which the servant girl crushes millet and dates. By searching a bit in the tent or in the shelter used as a kitchen, one may find two or three hemispheric wooden dishes destined to hold food and two or three conical bowls serving as drinking vessels. Hanging on one of the outer stakes of the tent are a wooden milking vessel, an esparto winnowing basket for sifting millet flour, serving at the same time as a dish cover, one or two little esparto mats which can serve the same purpose, and finally a few wooden spoons. Each mistress of a tent has a little

412 Each mistress of a tent has a little
356 wooden scraper to clean the floor of the tent, which is generally
342 covered with a layer of fine sand taken from the bed of the nearby wadi.

415 Let us add one or two earthen pots, little teapots and tea glasses, and we have an idea of Tuareg furniture, which, as one may realize, is reduced to the simplest terms.

484 When a camp is moved, all these objects are loaded on asses,
492 provided for the occasion with little pack saddles. The women are
[462] left with folding the baggage, loading it, and transporting it on the
[565] asses. They themselves ride on the baggage during the moving; only noblewomen travel on camel back. Camels are used in moving only if it is a long trip.

/230/ Chapter 3

Food

243 People may have said that the Tuareg, like many herding
262 peoples, lived on the milk from their herds. More precisely, they live on the products of their animals, but milk and meat alone would not be enough. Indeed, the base of their diet is a graminacea, bechena (Sorghum cernuum Host.), a kind of millet cultivated in the Saharian oases and in the Sudan.

[252 The Tuareg eat some wheat, but very rarely. Especially during
484] their moves and in the caravans, they eat wheat cakes cooked in the sand, for they are easily and quickly made.

[101] It is rather curious to note that the Tuareg, who belong culturally to the Mediterranean civilization (which may be called the wheat civilization), have not kept wheat as the basic food as other North African peoples have. And yet the question of food is one of the things which most ties man to his native milieu and which

243 he generally carries with him in his migrations. Wheat raising
262 goes down to the Sudan as far as Timbuktu, Aïr, and a little north of Nigeria; but everywhere it has been introduced recently, due to the influence of the Arabs, who have not abandoned their traditional food.

Béchena is a food they adopted because of their exodus toward
[412] the Sudan; they are at the present time much closer to the Sudan than they are to North Africa from the point of view of material living conditions, that is, unless this plant formerly existed in a self-sown state in the Sahara, as Professor Chevalier has assumed, and was one of the principal food resources of its first inhabitants.

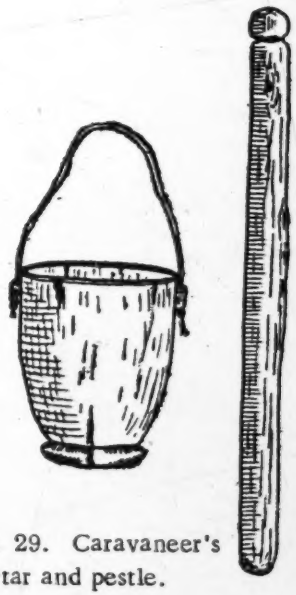


Fig. 29. Caravaneer's mortar and pestle.

177 By its agriculture
241 and its production, the Sahara is completely Negro. Agricultural methods, except for irrigation, /231/ are borrowed from the Sudanese, especially work with the hoe (daba), while North Africa mainly uses the plow which is unknown in the intertropical zone.

252 Béchena is eaten as a cooked flour porridge, as raw flour, or
262 mixed with liquids, water or milk.

Dates also play a large part in the diet of the Tuareg. Every year each family head organizes a little caravan to the Touat or
[438 484 513] Tidikelt to bring back two or three loads of poor-quality dried dates which are crushed with a pestle and eaten with camel's milk.

234 to extract all the water, and then dry them on /235/ small screens placed in the branches of trees. It goes without saying that cheese making is very rare in the Ahaggar and that the Tuareg make it [438] particularly when they are nomadizing in the Sudan. Every year the Ihaggaren bring back large supplies of cheese from their stay in the Sudanese zone; these cheeses, dry as a bone, are either made by the Ihaggaren or bought from the southern tribes. They make 252 an important contribution to the Tuareg diet. These dry cheeses 262 are ground in a mortar and reduced to small fragments so that they have the consistency of flour. Then they are mixed with food, either in béchena gruel or in a drink of béchena flour and dates.

262 It might be supposed that meat plays a very large role in the Tuareg diet. But let us recall one of our old French proverbs which says that the shoemaker is always the worst shod. We could apply this adage to herders, who perhaps eat less meat than anyone else. A herder has animals for the use of their products, but he very seldom eats them, for each butchering is a loss of capital.

Indeed, the Tuareg kill their animals only under very unusual [233] circumstances, especially at the time of religious and family festivals. These killings recall somewhat the religious meaning of sacrifices. This does not mean that they do not like meat, for when they raid a rival camp, they hasten to make drastic inroads on the smaller livestock and eat until they are about to burst.

224 Hunting furnishes them a little additional meat. Each year 262 they kill a certain number of gazelles and wild sheep, eating part [251] of the meat fresh and drying the rest to keep it on hand.

They capture star lizards (Uromastix acanthinurus), jerboas, 222 gondi (Ctenodactylus sp.), sometimes even jackals and hares. We 262 can add to their meat diet grasshoppers (Shistocerca gregaria), [324] which they grill in the embers and then dry in order to pulverize [252] them. All Saharian nomads are very fond of grasshoppers, and since remotest antiquity some North African tribes are supposed to

222 have made them the base of their diet; for this reason they were
262 nicknamed acridophages. The Nasamonians of Herodotus prepared them in the same way the Tuareg do, and the /236/ similar diets of the two peoples is perhaps not pure coincidence.

There are a few fish ponds in the Ahaggar, but the Imochar
226 and the Imrad do not eat the flesh of these animals; only the
262 Issekkemâren catch barbels and sometimes catfish, or rather they gather them up in the wadis after floods, for they do not know how to fish, properly speaking.

The sedentary peoples raise chickens, but the Tuareg do not
262 eat them either, since they consider the meat impure. The same interdict is extended to eggs. The only bird which is an exception is the ostrich. There are no longer any ostriches in the Sahara, but
[223] when the Ihăggaren go to the Sudan they capture them if they have the chance; in addition, they eat ostrich eggs cooked in the ashes.

Times of scarcity were sometimes experienced. They are rare
262 now that caravans can circulate freely, but they were much more
731 frequent when the state of war continued for a long time. The
224 Tuareg fell back on wild plants which do not generally enter into their diet: the young growths of tahlé (Typha elephantina), the
[824] leaves of the tanekfit (Eruca aurea) and the aramas (Atriplex halimus), the underground stems of the danoun (Cistanche lutea) which resembles asparagus, and many other plants of very dubious food value, which they ate to assuage their hunger. The state of famine can
[252] become so pronounced that they sometimes gather up old bones, grind them up, reduce them to flour, and make gruels of them. It
[574] goes without saying that it is during these periods that pillaging is at its height. People steal from camp to camp, from tribe to tribe, and everyone forgets his brother and his friend, thinking of only one thing -- survival by any means.

264 Before the French occupation the Tuareg as a general rule had only one meal a day, in the evening, after milking the animals. During the day they contented themselves with drinking a little milk.

252 262 The national dish of the Tuareg is asink, which is a porridge of millet cooked in water and moistened with butter or whey. This meal is especially popular in winter and during the entire cold season. During the very hot months, they prefer a beverage of water or whey in which they throw millet flour, diluted sometimes with dry cheese or powdered dates. This is alakoh. Dates are also eaten /237/ in summer, ground and mixed with water or milk.

252 When the Tuareg kill a sheep, they prepare the intestines which they enclose inside the stomach. After having tied the two extremities of the stomach, they put it on a bed of ashes to cook. This way of cooking, which is the one most commonly used by hunters, is called abatoul. Meats are prepared boiled or cooked under the ashes. Those that are boiled are particularly the ones which were previously dried (wild sheep, gazelle, sometimes sheep). In this case, they are first crushed between two stones, for they are as hard as wood; the meat is then spread in pieces on a dish of asink.

The Tuareg do not prepare roast meat over embers, but they place it under the ashes. When they want to cook a whole sheep, they open it in two and then put it under the ashes, taking care to turn it once during the roasting.

252 262 For great occasions -- religious festivals, marriages, or receptions for prominent guests -- the Tuareg butcher young camels. They serve them with a couscous of coarse-grained wheat.

The domestic animals slaughtered are goats, sheep, camels, and cattle when there are any. They do not eat horses, asses, or dogs.

[727] Cooking is done by the captives, close by the masters' tents.

264 Men take their meals by themselves and receive the food first. Women and children eat in their turn,, and the Iklan receive the rest.

252 They may not heat camel's milk which has just been milked
825 under penalty of causing sickness to the animal which gave it.

264 Insofar as personal interdicts are concerned, there are none to speak of, for although men and women must not eat together, this is a custom rather than an interdict.

[606] A married man must not eat with his parents-in-law, and the oldest son must not eat with his father. These are mainly marks of respect, perhaps traces of ancient practices of a religious nature.

/240/ Chapter 4

Hunting and Fishing

080 We shall now say a few words on the industries allied to the problems of food, that is, on hunting, fishing, animal husbandry, and agriculture.

136 Hunting. -- In a country where fauna was at all dense, hunting would have brought a not inconsiderable dietary supplement to the
174 Ihaggaren. In the past it was very much esteemed in the Sahara. Many rock drawings and paintings prove this, for they depict hunting scenes which interpret the state of civilization of the men, their preoccupation, and at the same time the nature of the fauna, which has changed a great deal since then.

[132] Today, with the very advanced drying out of almost all the Saharian districts, the fauna has come out into the open and the
224 species likely to be usefully hunted are reduced to a few. Only gazelles and wild sheep are still hunted. We cannot mention the addax and oryx antelopes, for the former is in the process of becoming extinct in the Sahara, while the second is confined to the steppe zone. The hare and jackal may be accessorily added.

of the average resources of their country and never let their flocks exceed the number of head necessary for the milk needs of their family -- about ten to twelve animals per person. The surplus is consumed or sold to the sedentary people in the agricultural centers.

/253/ The Ahaggar goats give very rich milk which makes excellent butter. The meat, which is a little tough, is eaten boiled, and the hide is valued for making saddle bags, waterskins, and sometimes tents.

The ass. -- The Ahaggar Tuareg have many asses. They do not breed them properly speaking, taking no care of them and letting them reproduce freely. Many Tuareg do not know the exact number of asses they have, for they do not use them all and abandon them in the mountains where they become more or less wild. The young ones, born in the meantime, do not let anyone get near them, and they must be trapped and then trained in order to be used. These asses running loose, called haoulil by the Ahaggar Tuareg, have given rise to a legend of wild asses. On this subject, Gautier cited the adventure of General Laperrine who had a "wild" ass hunted by his Arab horsemen, only to notice later that the animal had been castrated.

Although there are no more wild asses in the Ahaggar, it is nearly certain that there were some. They were pictured in the rock drawings of the Djorat wadi, and some still exist in Abyssinia where they are called "onager."

The ass is very much at home in the Ahaggar. It is possible that it was domesticated there. The legends of the Ihaggaren have kept the memory of the first inhabitants, the Issebeten, who had only asses and goats.

In their short moves the Tuareg utilize asses to transport baggage, and men and women also use them as mounts. The servants also take asses to replenish the water supply, making them carry the heavy waterskins on their backs or under their bellies.

To feed young camels and lambs, they use a kind of nursing bottle of wood shaped like a cup equipped with a tube. This utensil is called "ar'alala" ⵔⵄⵍⵍ . 231 415

For dishes, one finds in the tent wooden bowls of all sizes, called "akous" ⴰⴽⵓⵙ , plural "ikassen" ⵉⴽⴰⵙⵙⴻⵏ , large wooden dishes, "tar'elalt" ⵜⵄⵍⵍⵜ , and smaller dishes used as plates and called "tar'ehout" ⵜⵄⵜⵜ , plural "tireha" ⵜⵉⵔⵄⵜⵜ . To ladle milk or gruel, the Tuareg use a large ladle, "temoulat" ⵜⵎⵓⵍⵜ , plural "timoulatin" 415

[361]

Dautheville

Tuareg Camp at Tazerouk

ⵜⵎⵓⵍⵜ , and for eating they have ordinary wooden spoons called "tesoukalt" ⵜⵙⵓⴽⵍⵜ , plural "tsoukaline" ⵜⵙⵓⴽⵍⵉⵏ .

To separate the grains of "toulloult" and "afezzou" from their hulls, they use small trays of afezzou called "tissiit" ⵜⵉⵙⵙⵉⵜ , plural "tissiin" ⵜⵉⵙⵙⵉⵏ . 252 415

They also use a great deal the wooden mortar, "akabar" ⴰⴽⴰⴱⴰⵔ , with its pestle, "ihar'en" ⵉⵀⴰⵔⵄⴻⵏ . 415

Finally, they have hide sacks to hold dates or grains, which they call "adjera" ⴰⴷⵊⴻⵔⴰ , plural "idjerouen" ⵉⴷⵊⴻⵔⵓⴰⵏ . 281 415

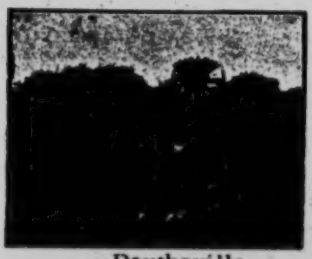
All the above utensils are made of the wood of the "teborak" (Balanites aegyptiaca, Simaroubaceae) and of the abser', or "tamat," (Acacia arabica). 415 824

usually satisfied with milk, "akh, " fresh ("akh oua kefaïen" 264
[illegible]) or sour ("akh iezza", [illegible]), at
the hour when the camels, sheep, or goats come in from
pasture.

The basic food of the Ahaggar Tuareg consists of bechna, 262
"inelli" (white-grain sorghum, Graminaceae), dates, "teïni, "
and milk, "akh. " [illegible]

But their country provides them with many resources 22
which they are careful not to neglect, especially the poor, 556
the "tileqqiouin" [illegible] , who constitute the majority.

All the "imr'ad" go to harvest the grains of "toulloult" 243
and "afezzou. " Women, children, youths, negroes and 221
negresses go into the wadis
to gather the harvest, which
takes place from May to June
for "toulloult" and from July
to the end of September for
"afezzou. " /29/


[000]

Dautheville

Idelès (Koudia)

Usually, before the
harvest several wadis are for-
bidden territory, and camels
are not led there until the
harvest is finished.

The produce is gathered
and put into hide sacks. After the grains have dried, they 252
need only to be put onto small trays of "afezzou, " called
"tissiin, " which are shaken, and the hulls fall off and remain
on top. The grains are ground to powder, and a kind of gruel
is made with water or butter.

The Tuareg are also very fond of "tikamarin" [illegible] 234 252 262 438
, cheeses as hard as wood which they get from Aïr. They
grind them in mortars and mix them in their food.

They very seldom eat meat, except that of game which 262
they can kill in a hunt: gazelles, mountain sheep, and 224
antelopes. But often they prefer to smoke this game in order 251 438
to go and sell it in the Tidikelt.

262
The nobles eat better, at least those who are well-to-do. 243
In the Ahaggar especially they own cultivated land in the 556
"ar'erems" (villages), where they grow wheat, "ired," barley, 565
"timzin," and bechna, "inelli"; but usually they sell their 423
438

[137]

Dautheville

Trees Called "Ahatés" (Acacia Albida) at the Tillemas of the Tessht Wadi (Koudia).

wheat and barley to the natives of the Tidikelt and are content with bechna, of which they are very fond. They claim that [824]
bechna is less heating to the stomach than wheat or barley.

The rich allow themselves the luxury of drinking tea, but 272
tea and sugar are very expensive, and they do not misuse them. 556
On the other hand, they do not hesitate to beg for them shame- 263
lessly.

When the year is bad anything seems good to the poor to assure their subsistence. In such years one sees them eating 222
/30/ "berdi," or "taheli," (Typha angustifolia, Typhaceae); 262
ground carob seeds of "talhas," or gum trees, which they call 735
"tahaha" ⁘ ; "tanékfalt (Diplotaxis duveyrierana, 252
Cruciferae); fruit of the "teborak" (Balanites aegyptica), which they steep to take out the bitterness; and even leaves of the "aremmas" (Atriplex halimus, Salsolaceae), which they boil.

In short, nature keeps food resources for them which prevents even the poorest from dying of hunger.

291 /103 cont./ occasions. The "ra'lki" is another veil, as large as the tabarikant and made of wool, but white; it is also very rare.

The Tuareg woman does not wear a sarroil but a kind of knee-length skirt, a simple piece of cloth tied around the waist, called "assedjebès." Young girls begin wearing assedjebès when they are nubile.

The woman wear ighatimen for footgear, carry tera, and all have a taralabt slightly different from that of the men. The iremdan is often carried without a case. In winter the tabrok (dokkali) is also a feminine garment.

[854] All of the young children are naked; later they put on the blue gandurah; the boys have a sarroil toward the age of eight or nine. At about fifteen, they begin to wear the veil.

Food

262 The Tuareg are particularly frugal eaters, and their condition of life does not predispose them to a finely prepared cuisine. Tuareg food has nothing about it to flatter the tastes of a gourmet. The few /104/ dishes palatable for a Frenchman [177] have been borrowed from the Arabs and will not be mentioned here.

The basic elements of the Tuareg diet are: millet, milk, and dates. Millet (enelé) comes from the Sudan or is harvested in the Ahaggar as a summer crop; the latter, whose grain is smaller, is better liked but is insufficient in quantity.

● 252 Millet (the "bechena" of the Arabs) is crushed with a pestle and winnowed to keep only the white flour. This flour is sometimes eaten just as it is after crushing: this is the "tibik" used on the trail by the hurrying cameleer, and it is sometimes used even in camp.

Also called tibik is a more complicated preparation: millet is crushed, winnowed, then washed and put in a tarahout. Heated pebbles are buried in the grain until it become slightly cooked or rather roasted. The progress of the

252/104 cont./ cooking is determined by the pleasing odor that comes from the dish. This grain is next ground together with dried dates. The powder thus obtained is eaten without further preparation.

The "arahara" has a more complicated recipe: crush the millet so that a very fine flour is obtained, crush some dates, and add a little water to form a paste, crush some "tikamarin" /cheese/; mix flour, date paste, and cheese powder together; add a lot of water until you have a liquid resembling milk. Drink cool in summer.

"Asink" is the Tuareg national dish: crush millet so that you have half of it in fine flour and the other half in coarse grains; separate the grains from the flour and pour the former in a pot of boiling water; cook for two hours until the bloated grains form a rather liquid gruel; pour the flour into the gruel, stirring the mixture with the "esseroui" (a wooden paddle used especially for the asink) with the pot still on the fire; obtain a rather thick consistency, dish into the tarahout, add milk if possible, and serve hot. When there is no milk, butter may be added, or the asink may be eaten as is.

[272] /105/ Milk, another basic food, is drunk whole as soon as it is drawn, or is mixed with sour milk, or blended with whey. To make butter, milk is poured into an "adjiouer" (the "chekoua" of the Arabs) and sits for a day, preferably in the sun, causing it to sour rapidly. The sour milk is then poured into another chekoua, which is stirred until a ball of butter is obtained. The sour whey left in the chekoua is drunk during the day.

[262] Fresh butter ("zebda" in Arabic) is called "white butter" (in Tamashek: "oudi oua amellen"); it is soon eaten, but only a small amount. Most of the product is transformed into "dahan" (Arabic -- in Tamashek: "oudi"), which can be kept a long time. White butter, with a small quantity of dates added, together with a few grains of wheat or millet and

252 /105 cont./ several stalks of a plant called "a'lnessis," is cooked for a very long time. When it is ready, it is poured into the "tahatiat" or the "arra'tan" for keeping. The tahatiat is a kind of guerba /waterskin/ made with skin from a camel's neck and still has the original curved shape. The arra'tan is shaped like a demijohn; it consists of a piece of camelskin molded in a hole dug in the ground, filled with camel dung and gravel, tied securely at the mouth by a cord, and thus dried and hardened.

[415]

"Tikamarin" is a cheese made from whole milk in the following way: a young goat is killed and its stomach, still full of milk, is carefully kept; the milk is allowed to harden in the stomach pouch, then is carefully preserved. A piece of this "seed" cheese, about the size of a gaming die, is plunged into a tarahout containing five to eight liters of milk. After a day the milk has completely curdled. A lump of this cheese, still damp, is crushed in the hands, previously washed, and made into slabs about 15 by 5 centimeters. These slabs are arranged for drying on a bed of afazzou stalks. Tikamarin is eaten dry; it is kept over a year, and it is said to be still edible after four years.

/106/ "Ioulsan" ("qlila" in Arabic) is a cheese made from the sour milk left over from kaing butter. This sour milk is poured into a pot and is heated for a long time. The contents of the pot are then poured in a special filter, a kind of afazzou basket; the water drains off and the remaining cheese is then fashioned into small circular cakes, six centimeters in diameter and two centimeters thick. Ioulsan is quickly eaten, but it can be kept dry and is used, above all, in making the argira which is eaten in the summer.

262 The Tuareg like meat very much; but they eat it relatively infrequently; yet some Tuareg say that one should not let ten days go by without eating meat.

The most used meat is goat; mutton is eaten less often, and camel in exceptional circumstances. The meat of

262 /106 cont./ gazelles and wild sheep is much esteemed, particularly since it costs nothing, but having it depends on chance. The hare is eaten only by children or Negroes. Birds, wild or domesticated, are not much liked.

• 252 Meat is eaten boiled or grilled, always well done. The Tuareg mechoui /roasted sheep/ is called "abatoul" (hole). A hole is dug in rather coarse-grained sand, and a large fire is built in it. The embers are then removed from the hole, and the dismembered animal, well cut open, is placed in it, without butter or spices. The meat is then covered with sand, and a fire is maintained over it for two or three hours. The meat is then pulled out, is strongly hit with a stick to knock off the grains of sand, and is ready for sampling.

[252] Practically speaking, the Tuareg never eat green vegetables; they keep dried onions (tarafaret), which give [251] some taste to their dishes; dried tomatoes, abundantly produced in the Ahaggar, are also used.

Wheat, rather seldom used, makes it possible to make couscous and flat cakes called "taguella." The Tuareg also make taguella with millet flour, but these are truly awful.

262 /107/ It is well to note the scruples of the Tuareg so far as Islamic food taboos are concerned.

They continue, in fact, to eat their traditional food, and it happens that their custom fits in with Moslem regulations.

To amuse themselves, children eat "tilout" and those large lizards called "dobs," which they grill on glowing embers. They open the stomach and eat little pinches of the flesh cooked in the skin, somewhat as one would eat a soft-boiled egg.

Chicken eggs are not much liked; children accept them, but they prefer dob eggs.

The daman, called akaokao, a wild little rodent of the granite hills, is eaten only by the Negroes.

European food has not penetrated the tent, so to speak; only patés are liked, but the Tuareg do not yet go so far as to

6:Blanguernon Y-5 (1937-1954) 1955 MS25 Tuareg MS25
Hoggar

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35. During a stop a Targui grinds his millet in a sheep's skin.

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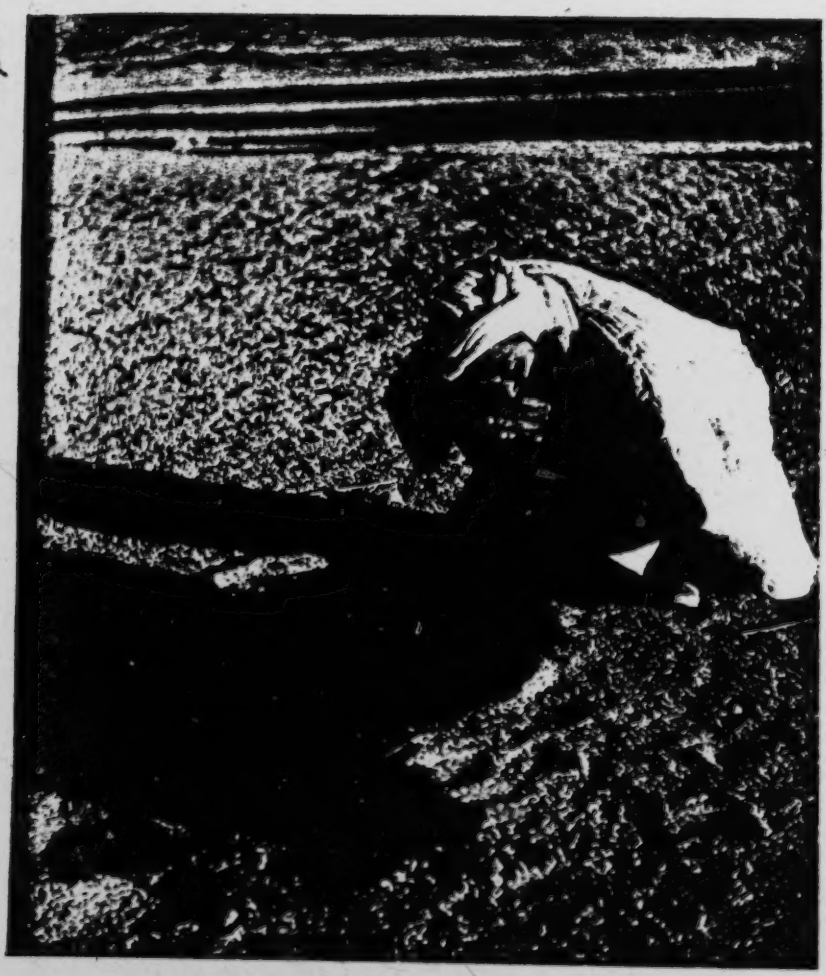

51. After killing a goat, one blows in the skin to loosen it.

[P.239]

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

to the killing of a camel for wedding guests. Otherwise the Northern Tuareg like those of Ayr only kill sick animals for food. 262

There are certain practical reasons why camels should not normally be killed for food among the Tuareg. Even very old camels fetch high prices at markets of the northern oases (Tamanṛaset, Tidikelt), and the Tuareg prefer to get the money instead of eating their old camels. This is easily understood when we consider the fact that one camel contains so much meat that it cannot be eaten quickly by the members of a household, and camel's meat is rather tough and must be boiled for several hours to be eatable. Besides, camel's meat is not very well suited to be preserved for eating at a later date on journeys. However, it can be dried and when sick camels are killed part of their meat is often prepared in this way. [435] [252] [251]

A camel is killed in a very particular way quite different from the method of slaughtering other domestic animals and game. It is killed as follows:— Cords are attached very firmly around the legs of the animal which is kept to the ground by several men who sit on its back and draw its head backwards. The artery is thereupon opened at the lower part of the neck close to the chest, and the knife is thrust into the animal at this place, but not so deeply as to touch the heart or the entrails. This stab is quite sufficient to kill the camel, but some people also cut its throat close to the head in the way other domestic animals are killed. Very peculiar also is the way camels are skinned. While other animals are skinned in such a way that the hide can be removed as entire as possible (cf. Fig. 173), the carcass of a camel is cut up before skinning. The four legs with their thighs are cut loose close to the carcass, which is thereupon cut into several parts by means of a large chopping-knife or an axe (cf. Fig. 44). The hide is thus removed from the carcass after partitioning; but it is difficult to remove the hide as it sticks firmly to the meat, and only part of it is taken off for later use. In Ayr the Tuareg do not 233* 000

233*
137

Fig. 44. Skinning and partitioning of a young camel. Ayr, *Irawdira*.

[Text continues on p. 67]

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25
Fulani MS11

The most dangerous African cattle disease is the rinderpest. It is known to have entered Egypt in the year 1884 from the regions around the Black Sea, and about 1890, or somewhat later, it came to Eastern Africa and to the Sudan. Rinderpest is nowadays widely found in Africa but it is rare or unknown in Northern Tuareg countries. Rinderpest is apparently very rare in the Ayr Massif and it occurs mainly south of the Massif in savannah country. The Tuareg have no remedy against this disease. It is stated by St. Croix that the Fulani of Northern Nigeria once deliberately exposed their cattle to mild rinderpest to make them immune from this disease in its more severe and dangerous form. However, this method did not work and the Fulani gave up further experiments of this kind. It is also mentioned by St. Croix that the Fulani practise a kind of vaccination against cattle pleuro-pneumonia and that this is done as follows:— A piece of infected lung is put into milk for two to three days and thereupon placed into a small opening cut under the nose-skin of the animal. The method is claimed to be effective (St. Croix 1944, p. 24 f.). Vaccination methods are also known to some of the Southern Tuareg, e.g. the *Iwillemmeden*. These people vaccinate human beings against small-pox by inserting the pus of this disease into wounds cut with a knife (Aymard 1911, p. 108), and they also vaccinate their cattle against cattle pleuro-pneumonia ("peripneumonie bovine"). They do this in much the same way as described above for the Fulani:— An infected piece of lung is placed in sour milk or in the soil for a few days, and is thereupon inserted under the skin of the forehead. Nicolas describes the method as dangerous because the infection attacks the whole forehead and also the nose-bone (Nicolas 1950a, p. 133), but two veterinary surgeons who practised among the *Iwillemmeden* of Tawa told me that they considered this kind of vaccination effective. The method is unknown among the Ayr Tuareg of the Massif where this contagious lung-disease is unknown or very rare.

I have no great knowledge of the contagious diseases in the Tuareg groups I have studied, but such diseases seem to occur comparatively rarely, and there is no veterinary surgeon attached to the French administration of Northern Tuareg countries. There is one veterinary surgeon in Agadez, but his most important field of work lies outside of the mountain massif to the south.

Among the *Kel Ferwan* Tuareg of Southern Ayr I have been told about two contagious diseases which, when they occur, may give rise to very heavy losses. One of these diseases is known to the Tuareg as *changa*. It attacks only cows, which die very quickly, but if cattle suffering from the disease are ritually killed their meat is nevertheless considered edible. One Tuareg told me that some years ago about thirty cattle of his camp died in one day from an attack of *changa*.

The other contagious disease I have recorded from Southern Ayr is called *tandert*. It attacks sheep and goats, and I collected the following notes about it:— The blood penetrates the animal's flesh which becomes quite red. If sheep or goats suffer from *tandert* and are ritually killed for eating, very great care must be taken in the preparation of the meat. It must be boiled until it contains no blood, and must not be eaten until it is cold and dry. It is said that if these precautions are not taken the people who eat meat from animals suffering from *tandert* will themselves become attacked by the disease, with the result that blood and pus may penetrate the skin at any part of the body. They say that a man who has eaten unboiled meat of an animal suffering from this disease with consequent infection is treated in the following way:— A species of ant more venomous than the normal small

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

catching wild donkeys in the mountains around the valley of Anu Mekkeren. The method is not used for proper game animals.

(7) A pulling and a throwing snare are both known as *tuɣunt*. They are said not to be used for hunting, though commonly employed to catch wild donkeys and domestic animals which have gone astray; cf. p. 108 f.

(8) The spiked wheel-trap (*tawchit*) provided with a noosed rope (*tuɣunt*) attached to a stick. This is used for gazelle and bigger game animals in isolated places rarely visited by representatives of the administration. According to Buchanan, the spiked wheel-trap is used for ostriches in the plains south of Ayr (Buchanan 1921, p. 117 ff.). Large traps of this type are also used for giraffe by certain hunters within the Cercle d'Agadez (Brouin 1950, p. 453).

(9) The torsion trap (*tenderbat*) akin to that of Ahaggar. It is used for big game animals, notably for barbary sheep.

(10) Snares (*tazek*, pl. *t'izagin*) made from strips of dum palm leaves are used for guinea fowl and other edible birds. They are generally set near water where birds come to drink. Little boys of the negroid *Imeggedezen* of Agadez also make snares of hair to catch small birds (Fig. 118).

These are the hunting methods known to the Ayr Tuareg, who do not engage much in hunting with the exception of the *Kel Tamgak* mentioned above. Most Ayr Tuareg refuse the small types of game and beasts of prey, and reject not only the *aɣata* lizzard (*Varanus* sp.), but also the smaller lizzard known in Ahaggar as *aggezzeram*, in Ayr as *emekkechchu* (*Uromastix acanthinurus*), though it is claimed that the latter is eaten among Tuareg of the *Kel Ewey* group. The two lizzards do not play any part in Tuareg mythology – the *aɣata* lizzard is greatly detested by the Ayr Tuareg who kill it with stones or sticks whenever possible. The Ayr Tuareg, including those of noble descent, have no taboos about birds and eggs, and many pastoral Tuareg collect guinea fowl eggs late in summer after the rains. There are a few animals not mentioned above which are considered edible among the Ayr Tuareg, e.g., the tortoise (*afaras*) which is found in the plains south of the Massif. With the exception of the *Kel Ewey* Tuareg the people of Ayr do not collect locusts (*tahwalt* in Ahaggar, *achwal* in Ayr). Locusts are eaten by all people of the two Northern Tuareg groups. The animals are roasted in the ashes or are boiled in a cooking pot to be pounded in the large mortar together with dried dates. This dish is very esteemed by the women who say that it is fattening and in this way adds to their beauty.

Certain weapons have not been mentioned above because they either cannot be considered proper hunting weapons, or because it is doubtful whether they exist among the Tuareg or not.

Traditional Tuareg arms comprise an iron lance (*allaɣ*), a sword (*takuba*), and a dagger (*télek*) carried in a sheath fastened to the left arm. The iron lance may serve as a hunting weapon, and this is true also of the sword. Thus the Ayr Tuareg of the *Kel Ferwan* group said that wild animals were occasionally killed with the sword, and they claimed that two Tuareg of the past had killed lions with this weapon.

The bow (Ahaggar, *taɣayyé* or *taɣaḥḥé*; Ayr, *taganzé*) and arrows (Ahaggar, *imurren*, sing. *amor*, or *tinassabin*, sing. *tanassabt*; Ayr, *imeran*, sing. *amer*) are not traditional Tuareg weapons. Nowadays very ineffective bows and arrows are used as toys by little Tuareg boys, but they are never used by

[text continues on p. 169]

Collecting

In this chapter on collecting such edible plants are mentioned as play a part in Tuareg nourishment. Wild plants are also collected for other purposes. Many species are important to craft or have a medicinal value. Some of these latter species are mentioned elsewhere in this study.

EDIBLE PLANTS OF THE AHAGGAR AREA

Wild plants which yield edible fruits, seeds, stems, or roots in Ahaggar comprise more than fifty different species. But the importance of collecting should not be judged from this, as all these plants are never found within the same area, and most are eaten only occasionally as a kind of relish or when agricultural food (wheat, barley, millet, dates) is lacking. I have supplemented my own list of edible plants with important information from Maire's study of Ahaggar botany (Maire 1933 & 1940). In my list the letters Tr., L.M., and U.M. stand for Maire's botanical zones, namely the Tropical Zone, the Lower Mediterranean Zone, and the Upper Mediterranean Zone. The following edible plants are collected in Ahaggar and adjacent regions:—

tirfas (sing. *tarfest*) (*Terfezia ovalispora*). Tr., L.M. A fungus which, according to Maire, lives on the roots of *Helianthemum Lippii* & *H. ellipticum* known to the Tuareg of Ahaggar as *urrug* (Maire 1933, p. 22, 159 et suiv.). This white fungus, which is frequently termed *tirfas n urrug* by the Tuareg, is prepared for eating together with various other dishes. It is frequently added to the so-called kus-kus.

tahlé (*Typha elephantina*) Tr. Roots and certain lower parts of the stem are eaten raw or boiled. When vegetable food is scarce they are also pounded or ground into flour.

akeywod (*Typha australis*) Tr., L.M. Roots of this plant are ground into flour.

téseñgelt (*Saccharum Ravennae*). Tr., L.M. "Cette plante ... laisse très souvent exsuder un liquide sucré qui se concrète en masses plus ou moins cristallisées; les Tuareg utilisent ce sucre" (Maire 1933, p. 54).

afezu (*Panicum turgidum*). Tr. A perennial grass extremely common in the lower valleys of Ahaggar. Seeds are collected in receptacles (e.g., *ahaga*, Fig. 213) by beating the ears of the grass with a stick. The seeds are not suitable for bread, but are esteemed for porridge and *tébik*, that is seeds pounded in the mortar and eaten without further preparation. Ashes of this grass contain soda and are often mixed with tobacco for chewing.

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222 *aṛenmud* (*Aristida plumosa & A. Adscensionis*). Tr. Seeds are edible.

262 *tullult* (*Aristida pungens*). Tr. A perennial grass found in certain parts of Ahaggar and particularly
252 common further north (Ahnet, Immidir) and in Tasilé-n-Ajjer. Seeds are collected by men and women in the following manner:— The ears are cut with a sickle and placed in a piece of cotton (e.g., a cotton blanket known as *abroṛ*). The ears are left for drying, and threshing is done by beating with a stick. The husks are winnowed as described for wheat and barley (cf. p. 206), and seeds are then stocked in *aǧera* (a skin-bag). According to Foucauld collecting may also be done by digging out the nests of [412] ants as these small insects stock a great many *tullult* seeds (Foucauld 1922, p. 29 f.). – The *tullult* seeds are used for bread and porridge, and are also eaten as *tébik* after pounding in a wooden millet mortar.

lewliwen (*Scirpus maritimus*). An annual plant having edible fruit in its roots (cf. Foucauld 1951–52, III, p. 1098).

taleggit (*Juncus maritimus*). Tr., L.M. Young shoots are edible.

iźéyan (*Asphodelus tenuifolius*). Tr., L.M. Eaten when vegetable food is scarce.

telokat (*Ficus salicifolia*). Tr. "Les fruits murs, de couleur rouge, sont tendres, un peu sucrés et comestibles" (Maire 1933, p. 76).

[574] *adamam* (*Osyris alba*). (Tr.), L.M. Its red fruits or berries are eaten as a relish. A bowl of berries is frequently offered to guests of Tuareg camps.

tanesmimt (*Rumex vesicarius & R. roseus*). Tr. Inedible according to Foucauld (Foucauld 1922, p. 85), while Foley states that leaves of this plant are eaten after boiling (Foley 1930, p. 42).

tawit (*Chenopodium Vulvaria*). (Tr.), L.M., U.M. An annual herb which is particularly common in the mountain of Asekrem. The small black seeds are collected in bowls or similar receptacles by rubbing the plants with the fingers. The seeds are ground into flour, which is very suitable for bread and porridge.

aramas (*Atriplex Halimus*). Tr., L.M., U.M. Seeds and boiled leaves of this plant are eaten when vegetable food is very scarce.

ébedébed (*Boerhavia agglutinans & B. repens*). Tr. An annual plant with edible seeds.

éhéyefyef (*Aizoon canariense*). An annual plant resembling the *twuit* plant and particularly common in the upper mountain zone. Seeds are used for bread and *tébik*, but not for porridge.

aǧar (*Maerua crassifolia*). Tr., (L.M.). A tree yielding edible fruit.

tadant (*Boscia senegalensis*). A tree or bush which is extremely rare in Ahaggar where its edible fruit are consequently consumed very rarely.

aggasit (*Farsetia Hamiltonii*). Tr., L.M. A seed-plant.

aheṛeṛa (*Alyssum libycum*). An annual plant which is rare in Ahaggar, while common in Tasilé-n-Ajjer. Eaten after boiling in water.

azezzeǧa (*Diplotaxis acris*). The plant is rare in Ahaggar. Its leaves are boiled and eaten.

tanekfayt (*Eruca sativa*). Tr., L.M. Leaves are eaten raw or boiled.

tamaghé (*Moricandia arvensis*). (Tr.), L.M., U.M. An annual plant – a kind of wild cabbage.

alwat (*Schouwia purpurea*). Tr. An annual plant. "Les Touareg mangent la feuille cuite et essorée, sans sel. La plante jeune donne une salade assez analogue à la Roquette, quoique d'un goût moins agréable" (Maire 1933, p. 111).

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abellengaḍ (*Reseda villosa*). Tr., L.M., U.M. Seeds of this plant are edible, but of bad taste – according to Foucauld 1951–52, I, p. 65.

abser (*Acacia Raddiana*). Tr., (L.M.). Fruits are collected mainly for goat fodder, but are eaten by human beings when vegetable food is scarce. The fruit is then crushed into flour. The resin of this acacia is also edible.

tamat (*Acacia seyal*). Tr. The resin (*taynwst*) is edible. I believe it is used mainly as a remedy against stomachache. This is perhaps also true of the resin of the *abser*-acacia mentioned above.

ahtes (*Acacia albida*). Tr., L.M. "La gousse est même comestible pour l'homme" (Maire 1933, p. 120).

ténefé (*Tephrosia leptostachya*). Tr. "Les Touareg mélangent cette plante desséchée au thé vert" (Maire 1933, p. 125).

lagul (*Alhagi maurorum*). Unknown in Ahaggar, but found in Tasilé-n-Ajjer. "Les racines tuberisées sont mangées par les indigènes (Killian)" (Maire 1933, p. 131).

alora (*Peganum Harmala*). Tr., L.M., U.M. An annual seed-plant. Seeds are used for *tébik*.

taburaḳ (*Balanites aegyptiaca*). Tr., L.M. A tree having edible fruits which are macerated in water to remove the bitter taste.

tedjoq (spelling according to Maire 1933, p. 241) (*Pistacia atlantica*). L.M. Very rare according to Maire (1933, p. 148). According to my own observations the fruit of this tree is eaten by Arab pastoralists (e.g., *Ulad Nail*) of the so-called *daya* region south of the Sahara Atlas. It is possible that it is also eaten by the Tuareg.

tahunek (*Rhus oxyacantha*). Tr., L.M. A tree having edible fruit.

téhaḳ (*Salvadora persica*). Tr. A tree with edible fruit.

tabakat (*Ziziphus lotus* var. *Saharae*). Tr. The berries are crushed and mixed with millet flour.

ăzawa (*Tamarix gallica*). Tr., L.M. "La manne produits par ces arbres est receuillié par les indigènes qui l'emploient comme matière sucrante. (Voinot)" (Maire 1933, p. 156).

tabarekkat (*Tamarix aphylla*). Tr. "Les rameaux mannifères sont employés pour sucrer l'eau" (Maire 1933, p. 159).

tafeltast (*Myrtus Nivellii*). (Tr.), L.M. "Les rameaux de ce Myrte sont récoltés par les Touareg, desséchés et exportés par sac entiers au Soudan et au Mzab, avec *l'Artemisia judaica* ssp. *sahariensis*. Ces deux plantes sont utilisées comme médicaments et comme condiments" (Maire 1933, p. 162).

awkal (*Cynomorium coccineum*). Tr., L.M. A plant yielding edible roots which are dried and ground into flour (cf. Maire 1933, p. 163).

aséyar (*Anethum graveolens*). (Tr.), L.M., U.M. An annual plant. Its seeds are used as a spice and for adding to tea.

takmezzut (*Teucrium Polium*). Tr., L.M. An annual plant used for adding to tea.

élel (*Nerium Oleander*). Tr., L.M. This plant is extremely venomous particularly so for camels, which die from eating its leaves. "La cendre de bois de *Nerium* est employée par les femmes du Tidikelt pour se faire engraisser. A cet effet elles mélangent un peu de cette cendre avec des dattes pilées et du beurre, puis absorbent ce mélange dans du leben" (Maire 1933, p. 170).

ayellachchem (*Solenostemma oleifolium*). Tr. A perennial plant. Its leaves are used as a substitute for tea.

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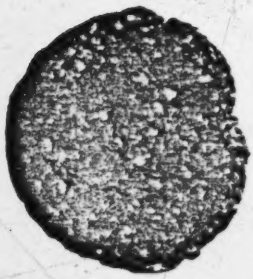

Fig. 126. A cheese-like mass of *adamam* berries (*Osyris alba*). The fresh berries are pounded in the large mortar (*tindé*) or are crushed between two stones to be formed into pieces of cheese form to be dried. This cheese-like mass of *adamam* berries is used by Tuareg women as a kind of face ointment against sun burn, pimples, and the like. They apply this ointment to the face as follows:— A little milk is poured upon a stone, the cheese-like mass of berries is rubbed against it, and the mixture of milk and berries is thereupon rubbed into the skin of the face with the fingers. Ahaggar, the *Dag Rali* tribe. Dimension: 0.075 m. (N.M. G. 5279a).

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262 *enag* (*Leptadenia pyrotechnica*). Tr. A tree with edible fruit.

[272] *tañhart* (*Mentha longifolia*). Tr., L.M. An annual plant. Used as an aromatic for adding to tea.

awit, generally known by the collective name *awihat* (*Salvia Chudaei*). Tr., (L.M.). An annual plant used as an aromatic for tea.

[824] [682] *éfelehleh* (*Hyoscyamus muticus* ssp. *falezlez*). Tr. This plant is extremely venomous for human beings, though not for animals. In the past it was used by the Tuareg as a poison for enemies. Members of La Mission Flatters (1880–81) were poisoned by the Tuareg using poison of this plant inserted into dates presented to the expedition. "La plante, absorbée à petite dose, aurait la propriété de faire engraisser. Les femmes du Tidikelt l'emploient dans ce but, en en faisant cuire une petite quantité dans de l'eau avec de la farine et de la graisse; elles laissent réduire et absorbent la bouillie obtenue, puis se couvrent pour transpirer (Voinot)" (Maire 1933, p. 192).

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252 *ahahel* (*Cistanche Phelypaea*). Tr., L.M. A plant yielding edible roots. After drying the roots are pounded in a large millet mortar to be used for bread which is much esteemed by the Tuareg. "Cette plante est recoltée jeune par les indigènes, puis placée dans le sable sous une couche de *drinn* (*Aristida pungens*) jusqu'à noircissement et dessication. Le produit sec est moulu et utilisé dans l'alimentation (Voinot)" (Maire 1933, p. 196).

éfetekchi (*Orobanche aegyptiaca* & *O. cernua*). Tr., L.M. A plant yielding edible roots.

tamzellit (*Orobanche sp.*). Tr. Very rare. A plant yielding edible roots.

tegellet (*Colocynthis vulgaris*). Tr. Seeds are eaten after boiling and drying.

alked (*Cucumis pustulatus*). Tr. Rare. Seeds are eaten after boiling and drying.

[263] *takkilt* (*Cotula cinerea*). Tr. "Les Touareg utilisent cette plante comme condiment, principalement pour la viande qui commence à se gâter" (Maire 1933, p. 209).

[439] *tdhereggelé* (*Artemisia judaica* ssp. *saharíensis*). Tr., (L.M.). "Cette plante, comme le *Myrtus Nivellei*, est récoltée en grande quantité, séchée et exportée au Soudan, où elle est employée comme aromate et condiment" (Maire 1933, p. 212).

[272] *zézzeré* (*Artemisia herba alba*). (Tr.), L.M. Used as an aromatic for adding to tea.

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

222 Even in good years it may happen that edible seed-plants are eaten by locusts before they become
134 ripe for collecting. Collecting is of secondary importance to the Tuareg of Ahaggar though to most
433 pastoralists it is more important than hunting.

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134 We have seen that Ayr has better grazing grounds and more game than Ahaggar, and it is only
137 natural that this southern area is also a more favourable one for the collecting of wild plants. Never-
222 theless, it seems as if collecting is not so important to the Ayr Tuareg who have more livestock for
433 which millet and wheat can be obtained without much difficulty. The number of edible plants utilized in Ayr is probably a very large one. Thus it is said that certain *Kel Ewey* Tuareg collect many different plants, but my inquiries into the methods and the value of collecting were limited to Tuareg of the *Kel Ferwan* drum-group of Southern Ayr where the following species are collected for food: —

222 *afagag* (*Acacia Raddiana*). Pods of this acacia are dried and, after pounding in a large millet mortar,
262 mixed with milk to be eaten or drunk like the Tuareg dish known as *agejira* (cf. p. 245 f.).

252 *ibezgin* (*Salvadora persica*). Fruit is eaten without any preparation.

tadent (*Boscia senegalensis*). Berries are pounded in the millet mortar to obtain the limpid juice which is added to porridge.

824 *tagayt* (*Hyphaene thebaica*). The dum palm, which is of extreme importance for the handicraft of the Ayr Tuareg, is also valuable as food. The young nuts are opened with a knife and the kernels are eaten. The old nuts have an edible outer coating which is eaten by children and even by adults when they are hungry. These old nuts are also pounded in the millet mortar together with seeds of *agerəf*, cf. below.

afezu (*Panicum turgidum*). This perennial grass is very abundant all over Ayr. Collecting of its seeds is done by rubbing the ears of the grass between the hands to allow the seeds to fall into a plaited bowl. Seeds are pounded in a millet mortar to be used for porridge.

ichiben, that is seeds of an annual grass — apparently identical with *Panicum longiflorum* and/or *P. spinosa*. The seeds are collected in two different ways: — (1) If the ripe seeds have fallen to the ground they are swept together with a bunch of straw. (2) The ears are cut with a knife to be threshed by pounding in a millet mortar. The seeds are highly esteemed, being collected to a greater extent than seeds of other wild plants. The seeds are used particularly for porridge, but also for certain other dishes such as *agejira* (cf. p. 245 f.).

tijit (*Eragrostis* ssp.). A grass yielding red seeds collected in the following way: — The ears are beaten with the hands so that the seeds fall into a plaited bowl. The seeds are used only for porridge.

wajeg (*Cenchrus catharticus* & *C. Priouri*). Annual seed-plants with thorny seeds. The dry plants are beaten with a stick and the fallen seeds are collected in a heap to be threshed with a stick. The seeds are pounded in a millet mortar for porridge.

agerəf (*Tribulus terrester*). An annual plant with thorny seeds which are collected as just described for the *wajeg* plants. The seeds are pounded in a millet mortar to be eaten without further preparation

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

a dish known to the Ayr Tuareg as *tédérka*. For this purpose the pounded seeds may also be mixed with pounded dum palm nuts.

achepar (*Sorghum virgatum*). A tall grass the seeds of which are swept together when fallen to the ground. They are used for porridge.

aguzagi. Edible seeds of a grass. They are swept together when they have fallen to the ground, and are used for porridge.

agedagedu. Seeds of an annual plant. When they have fallen to the ground they are swept together by means of a straw bundle. They are pounded in a millet mortar to be eaten as *tédérka* without any further preparation.

malokhiya (*Corchorus tridens*). A plant growing in the bush though also grown in gardens. The leaves of this plant are dried and thereupon pounded in a millet mortar to be used as an admixture to porridge-sauce.

abezey (*Cassia tora*). Leaves of this plant are plucked with the hand, or, if the plant is dry, shaken into a plaited bowl. They are pounded and used as an admixture to porridge-sauce.

kat'aket'i (*Cistanche* sp.). It is said to be known as *achellewen* among Tuareg of the *Kel Ewey* group. The edible roots of this plant are dug out with a stick. They are pounded and boiled for a kind of porridge.

acheku (*Glossonema Boveanum*). An annual plant with small facteal fruit which is eaten as a relish without any preparation.

These are the plant species collected by the *Kel Ferwan* of Southern Ayr. It may happen that some of these plants are destroyed by locusts, but in most years there are excellent possibilities of collecting wild seeds. Most plants are collected late in summer after the rains (at the season of *rarat*), or in winter (*tigrest*). It is said that in good years more than a thousand kilos of wild seeds can be collected by the members of a single household, but even this amount of wild seeds does not answer the need for vegetable products. Collecting is of secondary importance to the *Kel Ferwan* Tuareg. Very few of the plant species mentioned are collected if there is abundant millet. The main exceptions are the plants used for sauce-admixture, and the *ichiben* seeds. The latter are collected even by Tuareg who have enough millet, because porridge made from these seeds is considered a very delicious dish.

The two groups of Northern Tuareg and also the Tuareg of Ayr acquire their vegetable food products mainly from agriculture, which occupation will now briefly be described.

[text continues on p. 183]

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

241 I, p. 424). Rodd thinks the implement seen by Barth was clearly an importation from the north (Rodd
171 1926a, p. 133), and Feilberg assumes that if the plough was once known in this southern area it might perhaps have disappeared together with shifting cultivation (Feilberg 1931, p. 200). All this may be so, for there has been much contact between Ayr and the regions of Fezzan and Tripolitania in the past. But Barth does not say that he saw a plough but "a kind of plough", which may perhaps point to a type of large hoe drawn by men like that described from Senegambia by Feilberg (cf. Feilberg 1931, p. 169 f.).

243 The plough is unknown in the extensive area inhabited by pastoral Tuareg but this is not so with a kind of shifting cultivation. Pastoral Tuareg of Tasilé-n-Ajjer sow wheat and barley along the river valleys when these have been heavily flooded. Sowing is then done in a very simple way:— Holes are dug into the sandy soil, usually merely with the hand, and a few seeds are put into these holes. Wheat and barley thus sown grow in tufts with a space of 0.30 to 0.50 metres between each, and there seem to be about fifty straws in a normal tuft – the largest tuft I have seen contained about 130 straws (cf. Figs. 128–129). The plots cultivated in this way are generally very small, and the scattered wild plants growing in the plot are not always removed before sowing. The corn plots are left completely to themselves until harvesting, which is done with a sickle (Fig. 143). Primitive corn growing of this type cannot be practised continuously from one year to another in Tasilé-n-Ajjer, and the Tuareg of that region say that a household never grows enough corn in this way to meet its annual needs.

[178] The primitive method of corn growing without artificial irrigation is unknown in Ahaggar nowadays, but it seems as if it was known in the past (cf. Duveyrier 1864, p. 372), and the Ahaggar Tuareg have a particular term (*tawgest*) for a field cultivated without artificial irrigation (cf. Foucauld 1951–52, III, p. 1466).

Rodd states that rain-grown crops could be raised most years in certain parts of Ayr and that in earlier days a fair amount of cereals seems to have been produced in this way in Ayr (Rodd 1926a, p. 133). There is little doubt that this statement is correct, and I think that even in parts of Ahaggar millet could be raised without irrigation in most years, for millet has a very short period of growth.

[22] In Ahaggar (at Abalessa) it is sown in June-July and is harvested in September. Though millet plots are irrigated they are never watered much, and never to the same extent as wheat and barley which are grown in winter. In regard to Ayr, millet in southern villages of the Massif very frequently ripens in two months, and late in summer, at the end of the rains (*akasa*) or in the early dry season (*rarat*),

252 I have frequently seen well-developed small plots of millet and sorghum around deserted Tuareg camps where a great many seeds are always lost on the ground during the pounding and winnowing of millet for porridge. These self-grown plots, however, are not utilized by the Tuareg as the comparatively

134 small yield is quickly eaten by the numerous millet-eating birds. Owing to these birds it would be difficult for pastoral Tuareg to grow cereals in flooded valleys like the Tuareg of Tasilé-n-Ajjer, and it is partly for this very reason that the sedentary agriculturists of Ayr grow very little millet. Millet could easily be raised without artificial irrigation during the rains, and, in fact, millet was grown by shifting cultivation not far from Agadez as recently as up to the French occupation of Ayr.

245 In addition to the species of grain mentioned above there is one very important plant which can be grown without artificial irrigation, namely the date palm. In Tasilé-n-Ajjer there are river valleys

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Fig. 136. Irrigation of a young wheat-plot. The canal ridges are opened with a hoe in order to let water penetrate into the garden beds. Ahaggar, Abalessa.

to be used for dyeing skins red (cf. p. 282). Maize (*Zea mays*) is also grown as a summer crop in some of the cultivation centres; it is called *engafulé*, or *engafulé masri* (masri = Egyptian) because it is said to have been introduced from Egypt.

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Tomatoes (*tomatem*; *Solanum lycopersicum*) are grown mainly in summer and constitute a very important crop. The ripe fruit is sliced and left to dry on a layer of straw in the garden. They are crushed and pounded and are added to various dishes, e.g., the so-called kuskus (*keskesu*, cf. p. 247). Various types of melons and gourds are also grown in summer, e.g., the water melon (*talegezt*; *Colocynthis Citrullus*), a type of ordinary melon known as *tétakelt* or *tazenut* (*Cucurbita* sp.) which is frequently sliced and dried in the same way as tomatoes, and a kind of large gourd (*kabuya*; *Cucurbita maxima*). Certain other vegetables are grown in most gardens, notably various kinds of onions (*téskert*, *Allium sativum*; *éfeleli*, *Allium cepa*) and a kind of beans known as *tadellak*. A few plants are grown as spices, e.g., saffron (*tanermit*, *Crocus sativus*), red pepper (*chitta*, *Capsicum annuum*), or for tea-admixture, e.g., the mint (*émerner*, *Mentha piperita* var.) and a plant known as *lahabok* which is said to have been introduced from the Sudan. Two very poisonous plants are also grown in certain gardens of Ahaggar, namely *éfelehleh* (*Hyoscyamus muticus* ssp. *falezlez*), which also grows wild in the lower country (cf. p. 178), and *burzig* (*Datura Stramonium*) (cf. Maire 1933, I, p. 191 f.). Foucauld mentions two other plants grown for their medicinal value (*ibedliwen*, *Trigonella foenumgraecum*; *tikamnin*) (Foucauld 1951–52, I, p. 33 & II, p. 812). A kind of wild salad (*tamaghé*) is also grown in the gardens according to Foucauld (Foucauld 1951–52, III, p. 1170). Potatoes (*Solanum tuberosum*) are now grown in some of the mountain oases – mainly for selling to Europeans at Tamanrasset. Among other cultivated plants found in the gardens of Ahaggar mention can be made of the following species after Maire:—

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Lepidium sativum, *Brassica Rapa* & *B. oleracea* (*aharet*), *Linum usitatissimum* (*ilatelé*, or *anarka*), *Medicago sativa*, *Pisum arvense* (*demchi*), *Vicia Faba*, *Lens culinaris* (*elredes*), *Vigna catjang*, *Cori-*

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by many Tuareg, who say that they have not always known this white cotton, though indigo cotton has been introduced from the Sudan since very remote times). Maize has a normal period of growth of about three months, and two – in certain places perhaps even three – yields are taken in the hot seasons.

In addition to the above-mentioned cereals there are various kinds of vegetables grown in the Ayr gardens. Tomatoes (*tomatem*; *Solanum lycopersicum*) are grown at most seasons with the exception of the dry and very hot summer period (*éwilen*). Also common in the Ayr gardens is the sweet potato (*dankale*; *Ipomoea Batatas*), which is sown at the beginning of the rains and harvested in winter. The true potato (*batata*; *Solanum tuberosum*) has been introduced more recently, and is grown mainly to be sold to European households in Agadez. It is grown in Eastern Ayr (Tabello). Melons (*Cucumis melo*) and water melons (*Colocynthis citrullus*) are grown all over Ayr and there are different vegetables such as onions (*Allium cepa & A. sativum*), which are harvested at most seasons. Two plants are grown mainly because they are important as admixtures to porridge sauce. One is called *ékabewwa* (*Corchorus olitorius*); it has maize-like seeds which are pounded in a mortar for sauce-making. The other plant is known as *malokhiya* (*Corchorus tridens*); its leaves are dried and pounded for sauce (cf. p. 243). The latter plant also grows wild outside the gardens. There are in Ayr also certain spice-plants, e.g., *Capsicum annuum & C. frutescens*. To all these cultivated plants can be added certain fruit trees, such as the date palm (*talesdar*; *Phoenix dactylifera*), the fig tree (*tahart*; *Ficus carica*) grown in the mountains, and the lemon tree (*lemon*; *Citrus aurantifolia*) which is grown in Southern Ayr; it yields very small fruit which remains green even when ripe. It should finally be mentioned that the cotton plant (*ebduga*; *Gossypium hirsutum*) is also grown in some gardens of Southern Ayr. According to Miré and Gillet it was introduced into Ayr by the Hausa, but the plant has also been introduced further north in the Sahara in Tawat (Miré & Gillet 1956, p. 244). As stated by Rodd, the cotton plant is rare in Ayr and has perhaps been recently introduced into this region (Rodd 1926a, p. 132). There are many other cultivated plants in Ayr, but the above mentioned constitute the most important species.

In Ayr, as in the north, irrigated cereals form the basis of agriculture. Irrigation is carried out by means of a system introduced from the north, and the agricultural techniques largely resemble those of that section of the Sahara inhabited by Northern Tuareg, though there are certain differences. A new garden in Ayr is prepared by cutting and burning away the wild vegetation of trees, bushes, herbs, and grasses. By crop rotation (wheat and barley in winter; maize, millet, and sorghum in summer) it is possible to cultivate the same garden plot for a few years in succession – up to six or seven years, it is said. After this time it becomes necessary to make a new garden, or to manure the old garden plot with camel and cow dung whilst manure (*taki*) from other animals or from human beings is said not to be used, as it would cause the crops to become inedible. A well-manured garden plot can be cultivated continuously for about fifteen years. But fertilizing is not practised by all agriculturists, and to my knowledge they do not carry fresh soil to the garden plots as is the case with the agriculturists of Ahaggar. Agriculture in Ayr therefore frequently resembles shifting cultivation, though plots are irrigated, and deserted garden land is frequently seen in the valleys where agriculture is practised.

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Fig. 149. The market place of Agadez. In the front negroid Hausa men roasting small pieces of meat on a spit; in the background Tuareg camels offered for sale.

484 pack-camels to the salt pit of Amadror to mine salt in the hot season. They load the camels with salt
487 and bring them to the camp where further preparations for the journey are made. When the caravans
[317] have started southwards they stop in the Tamesna plains and rest there for at least one month to allow
[497] the pack-camels to feed on annual pasture, and, if necessary, to exchange the pack-camels with others
[22] kept by the Ahaggar Tuareg in Tamesna. Thereupon the caravan will continue towards the millet-growing towns and villages of the Sudan to bargain with the Hausa. The caravan returns to Ahaggar again at the end of March or at the beginning of April, so that the total duration of a south-bound caravan is up to six or seven months.

433 The Sudanese millet trade is of extreme value to the subsistence of the Ahaggar Tuareg. It is par-
439 ularly important to their economy that they obtain millet for non-nomadic products transported by camels, which are mainly bred outside of Ahaggar. The millet trade is consequently not much influenced by Ahaggar's changeable climate. According to official statistics, the Ahaggar caravans in 1946 exported 375 tons salt, and imported 720 tons millet, while the cereals grown in Ahaggar amounted to 197 tons (cf. Malaurie 1953, p. 344). According to Galan vegetable food grown in the gardens of Ahaggar in 1950 (a bad year) amounted to 121 tons wheat, 5 tons millet and barley, and 4 tons of tomatoes – about 10 kg of wheat and 0.5 kg of millet, barley, and tomatoes per person (Galan 1951, p. 233). We see from this that the amount of cereals acquired in the Sudan far exceeds the amount grown in Ahaggar, and as we have mentioned, the millet trade is also important for the establishment of Tuareg agriculture in their own country where this cereal is used for payments to cultivators. It can also be added that the Sudanese caravan trade is more important to the Tuareg than appears from the figures above. For salt is much more valuable than millet, and for one load of salt the Tuareg receive from four to fifteen loads of millet – in 1946 the price was fifteen to one (cf. Malaurie 1953, p. 344). It is evident that the Tuareg could not take all this millet back to Ahaggar. Most of it is re-sold

[416] [435]

Food Preparation

It is natural to open this chapter on food preparation with a description of the use of milk (*akh*) among pastoral Tuareg. The milk which serves as nourishment for the Tuareg derives from goats, sheep, cows, and camels. Milk of all these animals is frequently drunk fresh without any preparation, and this is generally the case with camel's milk, which is not fitted for churning butter or for the manufacture of cheese (cf. p. 63). Milk of goats, sheep, and cows is used for butter and cheese, and is added to various dishes to be described below.

Fresh milk, which is known to the Ahaggar Tuareg as *akh kefayen*, is sometimes heated by means of hot stones (*iḍaren* in Ahaggar; no particular name in Ayr). The stones heated are then put directly into the wooden milking bowl. The Tuareg practise this method mainly in winter as they do not like to drink cold milk, but milk is heated all the year round in this way with milk of animals which have just brought forth kids, lambs, or calves including camel calves. The milk taken from a mother animal until about twenty four hours after the birth of kids, lambs, or calves is known to the Tuareg of Ahaggar and Ayr as *édeyes*. It is very rich and when it is heated by means of hot stones it becomes very thick forming almost a kind of cheese which is highly esteemed by the nomads. The milk of sheep and goats is considered *édeyes* for two days after the birth of kids and lambs, though this term should properly be applied only to milk taken the first day after birth. The main reason for using hot stones for milk heating is said to be that milk does not get dirty in this way as it does if heated in earthenware pots over the fire (cf. p. 126).

Sour milk (*selay* in Ayr) is consumed mainly by the Ayr Tuareg, who conserve it in skin bags and especially in calabashes, for which reason this sour milk is also known to the Ayr Tuareg as *akh n ezenu*, that is "calabash milk". The milk is often left about twenty four hours for souring, and it is then placed in a very cool place in order that it may not turn into junket which is not eaten by the Tuareg.

Both in Ayr and in Ahaggar the Tuareg may add water to fresh milk (cf. p. 126), and the Northern Tuareg also add water to buttermilk (*akh n agiwir*). This mixture of water and butter-milk is in high esteem among the Northern Tuareg, and camel riders frequently carry it with them in a special skin-bag, known as *tasufra* (Fig. 155), attached to the riding saddle. Butter-milk cannot be transported in this way if water is not added, for the milk, though already once churned, will become butter during the camel's march. The Ayr Tuareg do not drink butter-milk which is given to domestic animals, while this beverage is so appreciated by the Northern Tuareg that some of them will not drink fresh milk unless butter-milk has been added, a mixture known as *agerengefa*, *akh imsayen*, or *amsey*.

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butter in Ahaggar, and butter reserved for greasing the hair is frequently kept in a large horn (*isek*) of barbary sheep (Fig. 165).

The Ayr Tuareg make butter (*wijl*) in much the same way as the Northern Tuareg. For churning they use a skin bag (*awwar*), or a calabash (*azemu*), and they say that they prefer skin bags in winter, and calabashes in the hot season. Butter is heated or boiled immediately after churning, but the Ayr Tuareg do not add parts of plants, date flour, or the like. In Ayr butter is not churned as regularly as in the north. It is used mainly for cooking meat of thin animals, for a sauce which may be used for millet porridge instead of milk (cf. p. 243 f.), and for greasing the hair. Among the Northern Tuareg butter is added to many different dishes and particularly to bread, which is eaten almost daily by many people. In years of drought the Ahaggar Tuareg get their butter from Ayr (cf. p. 212, 215), and the Ayr Tuareg make much butter for export in such circumstances. They churn most butter from cow's

Fig. 154a–c.

a. Wooden funnel. Made by blacksmiths. Ahaggar, the *Dag Rali* tribe. Dimension: 0.146 m high. (N.M. G. 5203).
b. Funnel consisting of a piece of calabash which derives from the south. Ahaggar, the *Dag Rali* tribe. Dimension: 0.131 m high. (N.M. G. 5202).
c. Wooden funnel with a strap of cord of goat's hair. Made by blacksmiths. Ahaggar, Olufsen's collection. Dimension: 0.175 m high. (N.M. G. 1.150).

All wooden funnels are cut from wood of the *tahawakkat* tamarisk (*Tamarix aphylla*).

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Fig. 166. Pail (*ayo*) made from tinned brass by blacksmiths. It is used for storing butter to be used for food preparation in the tent. Pails of this type form part of the dowry in the *Dag Rali* tribe. Ahaggar, *Ahl Azzi* Arabs of Tamanrasset. Dimension: 0.155 m high, 0.230–0.235 m in diameter at the rim. (N.M. G. 5820).

they perform a sacrifice, the idea of which seems to be an identification of the man and the killed animal. This idea appears most clearly at the sacrifice made on the occasion of the name-giving feast seven days after the birth of a child. A marabut, that is a Tuareg of the *Ineslemen* class, and the father of the child stand close together with their faces towards Mecca while the animal to be sacrified is kept to the ground. The marabut cuts the animal's throat and doing so cries out the name to be given to the child, and this name is thereupon repeated by the child's father. When the killing is performed in this way the knife (*elmusi* in Ahaggar; *ɛzegiz* in Ayr) and the cut across the throat are washed with water before skinning is undertaken. I have dealt with certain ideas of Tuareg sacrifice elsewhere, and have stated that on certain occasions they may sacrifice not to God but to the *Kel Asuf* spirits (Nicolaisen 1961, p. 122 f., 147 f.). But whatever may be the ideas attached to Tuareg sacrifices all animals, with the exception of the camel (cf. above p. 65), are killed by cutting their throat.

The methods of meat preparation are almost identical in Ayr and Ahaggar. The most common method everywhere is cooking in an earthen pot, known in Ahaggar as *ufrun*, *tɛfirt*, *alekkin*, or *talekkint* according to its size and form, or in a metal pot (*ɛfir*) of European origin. Such European pots are common everywhere in Tuareg camps, but earthen pots are still used though less durable, for earthen pots are cheap. Pots made of metal or copper, which are also known as *ɛfir*, were also found among

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Fig. 165. Horn (*lork*) of barbary sheep used for storing butter for greasing the hair. The opening is closed with a piece of date palm bast (*asan*), and the edge is pierced with a glowing awl (*ẖadel*) for the insertion of a cord of goat's hair by means of which the horn is attached to the tent ceiling. Ahaggar, the *Dag Ɣali* tribe. Dimension: 0.30 m long. (F.M. 236).

the Tuareg in the past. I believe that they were made by blacksmiths or imported from the north. Pastoral Tuareg do not manufacture earthen pots which are obtained from sedentary people. The cooking of meat is perhaps not a traditional method of food preparation to the Tuareg, though they seem to have used cooking pots for centuries.

A method of meat preparation undoubtedly introduced recently among the Tuareg, is that of spit roasting. Meat roasted in this way is known as *mechwi*, a word of Arab origin, and the Northern Tuareg have taken over the method from the Arabs. The *mechwi* method is also known in Ayr, where it has perhaps been introduced by French administrators who had learned to appreciate meat thus prepared during their visits among Northern Tuareg and Arabs. Pieces of sheep and goats and entire animals are prepared in this way (Fig. 174), and the meat should preferably be prepared with butter and red pepper before roasting.

The traditional Tuareg roasting method is to place entire animals (goats, sheep), or parts of them, under the hot ashes of the fire. This method is known to the Northern Tuareg as *abotul*, to the Tuareg of Ayr as *ébewil* (Fig. 175). This method of roasting meat is practised everywhere among the Tuareg, and it is on the whole similar to the method used for bread-baking described below (p. 238 f.).

Meat-roasting in the ashes is no doubt an ancient Tuareg method of food-preparation, and this also holds good for another method described in connection with the preparation of milk, namely food preparation by means of hot stones (cf. p. 221). The Ahaggar Tuareg prepare the stomachs of goats, sheep, and barbary sheep in this way, putting hot stones into the stomachs, while camel stomachs are boiled in a cooking pot and gazelle stomachs roasted in the ashes according to the *abotul* method mentioned above. These rules of food preparation seem also to be practised by the Ayr Tuareg, who put hot stones into stomachs of sheep and goats together with small pieces of meat. A stomach of goats or sheep prepared in this way, however, is given a final treatment in hot sand or in ashes close to the fire. The stomach of sheep or goats cooked with hot stones is known as *tarafa*, and a related word seems to be known also in Ahaggar (cf. Foucauld 1951–52, IV, p. 1583).

The Tuareg eat most entrails of their slaughtered animals. Entrails of camels are normally boiled, and kidneys of all animals are prepared in this way. Most entrails of goats and sheep (liver, heart, and lungs) are roasted on the embers or in the ashes, and in Ayr the Tuareg roast fat put into the abomasum (*tederant*). The Northern Tuareg generally prepare liver and fat together in the following manner:— The liver is roasted upon the embers, is thereupon cut into small pieces which are wrapped

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up with small strips of fat. The pieces of liver covered with fat are put on a slender iron or wooden rod to be roasted slightly over the fire. This dish is known to all Tuareg by the Arabic word *ehmefsif*. It was introduced among the Northern Tuareg by the Arabs, but is not widely known among the Ayr Tuareg.

This brief description of Tuareg meat preparation can adequately be supplemented by a reference to two peculiar dishes:— (1) A dish known to the Ahaggar Tuareg as *talebeggar*. It consists of meat which after boiling or roasting is pounded in a large mortar and frequently served with liquid butter. This dish is also known to the Ayr Tuareg. (2) A dish which is described from Ahaggar by Foucauld under the name *abangor*. It consists of untanned skin which is eaten in case of hunger after the following preparation:— Untanned skin from household implements, shields, and the like is roasted under the ashes, and is thereupon pounded into small pieces. These are eaten without any further preparation, or after boiling. (Foucauld 1951–52, I, p. 73).

Like other North African peoples the Tuareg dry meat of domestic animals and of game. The people of Ayr know three distinct drying methods, namely (1) *iwesan*, that is meat which is boiled until it is free of blood; it is dried in the shade; (2) *tikelsin*, uncooked meat cut into pieces to be dried on a string in the shade; (3) *kules*, uncooked meat cut into stripe which are dried for some time to be treated with salt and various spices. This last method is not practised among the Tuareg of Ayr, but by sedentary people of Agadez and by Negroes further south in Damergu. The Ahaggar Tuareg generally boil or roast the meat before drying; meat roasted in the ashes according to the *abanul* method and thereupon dried is known as *takasu*. I do not know whether the Ahaggar Tuareg also practise the method of drying raw meat like the Ayr Tuareg, but the dried *agezzeram* lizzards which they take to Tidikelt on trading expeditions, are dried uncooked. Furthermore, the method of drying raw meat is known elsewhere in the Northern Sahara, and I have myself seen it practised among the Berber-speaking *Chawiya* of Aurès.

I conclude the description of Tuareg meat preparation with a brief note on the use of blood of living

Fig. 166. Wooden double-vessel (*azaw*) to contain water and butter for greasing the hair. Similar containers with a third vessel for fine-grained sand are also found among the Tuareg. Made by blacksmith from wood of the *taburak* tree (*Balanites aegyptiaca*). Geometrical ornaments are produced by burning with a hot iron. Ahaggar, *Ahl Azzi* Arabs at Tamanrasset. Dimension: 0.241 m long. (N.M. G. 5880).

[text continues on p 235]

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camels. This blood never constitutes a proper dish to the Tuareg. They bleed camels to drink their blood only when they lack water on journeys in the desert. Bleeding is done according to the method described above, and the blood is collected in a drinking bowl. But the Ayr Tuareg say that they work up the mass of blood with the fingers with the result that the upper part of the amount of blood becomes more liquid, though it is always red in colour.

The Tuareg use the following implements to make cereals or other vegetable products into flour:—

(1) A large wooden mortar (*tindé*) with a heavy pestle (*éheren*) (Fig. 177). It is used in all camps and villages of Ahaggar, Tasilé-n-Ajjer, and Ayr, and is in fact known all over Tuareg country. It is used mainly for pounding millet and sorghum, but it is also employed for pounding other cereals, including certain wild seeds, and for dates, cheese, meat, locusts, and the like. These large wooden mortars are manufactured by the blacksmiths of Southern Tuareg country, including Ayr, where most Northern Tuareg obtain their mortars. Among the Northern Tuareg there are also other mortar types. A small mortar which like the former rests on a foot and is known by the same name (*tindé*) (Fig. 178), is used mainly by sedentary agriculturists for pounding rock-salt, dried tomatoes, tobacco for chewing, and other plants or materials to be used in small quantities. Another type of mortar without a foot and known to the Northern Tuareg as *akabar*, or *tokabart*, (Fig. 176) is found mainly among pastoralists who use it on journeys for pounding millet.

(2) A saddle quern (*tehunt*) (Fig. 179), which consists of two natural and in general unfashioned stones, is found in most camps of the Northern Tuareg. This constitutes the only grinding implement for wheat, barley, and certain wild seeds among the *Kel Ajjer*. The stones used for saddle querns are sharpened at intervals with a hard stone or some other hard object (*tasettekut*) in order that they may grind effectively. A simple saddle quern (*asar*) is also known to the Ayr Tuareg, but it is less common there than in the north.

(3) The handmill (*tasirt*) (Fig. 181) is not a traditional implement of Tuareg culture. It is widely known all over Northern Africa both by Berbers and Arabs, by sedentary peoples and nomads living in black tents. It has been introduced to Ahaggar mainly by the immigration of the Arabic speaking Harratin (Iraggaren) of Tidikelt,

Fig. 169a–c. Pieces of butter-milk cheese (*awiss*, pl. *iwhan*).
a. Ahaggar, *Harratin of* Abalessa. Dimension: 0.066–0.068 m in diameter, 0.022 m thick. (N.M. G. 5816).
b. Ahaggar, the *Afuh-en-tehlé* tribe. Dimension: 0.062 × 0.022 m. (N.M. G. 5817b).
c. Ahaggar, the *Afuh-en-tehlé* tribe. Dimension: 0.058 × 0.016 m. (N.M. G. 5817c).

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Fig. 170. Sacrificing a goat at the naming ceremony called *isuwen*. A marabut and the child's father keep the animal firmly to the ground. They stand with their faces towards Mekka and the camp of the new-born child. The marabut cuts the animal's throat simultaneously crying out loudly the child's name which is thereupon loudly repeated by the father. Ayr, the *Iguddyuren* tribe.

4/2 *Harratin* (*Izeggaren*) of Tidikelt, and it is now also found in Tuareg camps (Fig. 182), where it is
252 less frequent than the above-mentioned saddle quern. The handmill was entirely unknown among the Ajjer Tuareg during my visit to Tasilé-n-Ajjer in 1952. The Tuareg who possess handmills obtain them from the sedentary agriculturists of Ahaggar (Tamanraset). – When saddle querns or handmills are used, a piece of cotton or skin (*asentel* in Ahaggar) is always placed under the grinding stones to catch the flour (Figs. 180, 182).

262 The Tuareg have many different vegetable dishes. The most important are bread, porridge, gruel, and various mixed beverages.

[262] Bread is a prominent dish for all Northern Tuareg who bake it mainly from wheat flour. Wheat bread has been my ordinary dish among all Tuareg of Ahaggar and Tasilé-n-Ajjer. Lhote states that

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Fig. 171. Ordinary meat-knife (*elmus*) of the type used among Northern Tuareg and Arabs. Its broken handle is mended with hide of barbary sheep sewn with leather thread. Ahaggar, the *Dag Ɣali* tribe. Dimension: 0.28 m (total length). (F.M. 249).
All knives are manufactured by blacksmiths.

wheat bread is eaten particularly during migrations and on trading expeditions, or in periods when butter is rare (Lhote 1955a, p. 262). This statement disagrees with my own experience. Wheat bread is an ordinary diet of many Northern Tuareg. Bread is also baked from barley and from certain wild seeds (notably *tawit, Chenopodium Vulvaria*; *ẽhéyefyef, Aizoon canariense*; *tullult, Aristida pungens*) and wild roots (*ahakel, Cistanche Phelypaea*), while millet and sorghum are considered less suitable for baking. Seeds are generally prepared for baking by grinding them into flour by saddle querns or handmills. In Northern Tuareg country there are two types of bread which have been introduced as a result of contact with Arabs or the Arabic-speaking *Ḥarratin*. One type is named *elfetat* and is baked

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Fig. 172a–b. Meat knives.
a. Knife (*dzegiz*) of Tebu type to be carried in its sheath around the upper arm. These knives are sometimes used in Ayr. Agadez. Dimension: 0.370 m. (total length). (N.M. G. 6620a–b).
b. Knife (*dzegiz*) of the double-edged type normally used in Ayr. The *Imezzureg* tribe. Dimension: 0.377 m (total length). N.M. G. 6665a–b).

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Fig. 173. Tuareg skinning a ram. Ayr, the *Igendéynen* tribe.

252 by placing the dough on a baking sheet. The other type of bread is generally known by the Arabic word *khubz*. This is baked from dough placed in the sand close to the fire, where it is covered with hot sand, ashes, and glows. These two types of bread in Ahaggar are baked mainly by sedentary agriculturists and by Arab families. The type of bread traditionally baked by the Tuareg differs from Arab bread in that it is not made from proper dough, but from a kind of thin porridge or gruel consisting of flour mixed with water. This Tuareg type of bread is known as *tagella* and is baked as follows:— A heavy fire is lit in a shallow depression (about 25–30 cms in diameter and 8–10 cms deep) made

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into fine-grained sand carried from the river bed to the fire place in front of the tent. When this heavy fire has calmed down the embers and most of the ashes are moved from the shallow depression to its fringes by means of a small stick, and the thin porridge or gruel of flour and water to which also a little salt is added is poured out into the depression, a spoon being normally used to remove all the gruel out of the wooden bowl in which it has been stirred. A bunch of dry grasses, herbs, or tender twigs is thereupon fired over the gruel in order that its surface may harden, and it is then covered with hot fine-grained sand, ashes, and embers in the order mentioned. If the embers are considered insufficient for baking, a small fire may be lit on the top of the sand and ashes covering the gruel-bread, which is taken out after about twenty minutes to be turned and baked in the same way on the other side for a few minutes. Baking is then finished, the bread is finally removed to be washed in water (Fig. 183). It is broken into pieces and eaten from a large wooden bowl (Figs. 195a–b) together with liquid butter. It is eaten with wooden spoons (Figs. 191).

The type of bread just mentioned is known to people of the *Kel Ferwan* group as *tugella*. It is made by very few Tuareg. Indeed, when I travelled together with Ayr Tuareg I very frequently baked my own bread as I had learned to from the Tuareg of Ahaggar, because very few of the Ayr Tuareg I met were familiar with bread baking. Bread is not a staple diet of the Ayr Tuareg, and when they want to bake wheat flour they generally do so in the following way:— The flour is mixed with water to a dough which is placed upon the bottom and sides of a metal pot heated over the fire. This type of bread or bread-like dish is known to the *Kel Ferwan* Tuareg as *gurasa*. It can be mentioned that the *Kel Ferwan* Tuareg also bake a particular type of bread from millet flour mixed with certain other plant materials, but a bread of this kind is not baked for ordinary food, but as a kind of medicine.

Fig. 174. Roasting meat-lumps by the *mechwi* method. Ayr, *Ech-chikhen* Tuareg of Damergu.

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Fig. 175. Meat-roasting in the ashes – the method known as *ahatsi* (Ahaggar) or *ihewil* (Ayr). Ayr, the *Irawatten* tribe.

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Fig. 176. Little mortar of the type known as *akabar*, or *takobart*. This type of mortar is used by pastoral Tuareg on their trading expeditions, and it is provided with a handle (*ayaw*) of cord (goat-hair) for suspension. Ahaggar, manufactured by a blacksmith of Tamanrasset, the *Aghak-en-sokki* tribe. Dimension: 0.23 m high, 0.16 m in diameter at the rim. (F.M. 111).

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Fig. 177. The large millet mortar (*tindé*) with its heavy wooden pestle (*ẓheṛen*). It is used almost daily for pounding millet in the camps and it is used also to pound other cereals, dates, and even meat. Mortars of this type are manufactured in Southern Tuareg country by blacksmiths. The specimen depicted is made of wood from a tree growing in the Sudan and known to the Northern Tuareg as *tuyla*. Introduced to Ahaggar from Zinder, the *Dag Ɣoli* tribe. Dimension of the mortar: 0.445 m high, 0.299 m in diameter at the rim. Dimension of the pestle: 1.255 m long. N.M. G. 5224a–b.

Fig. 178. Little mortar (*tindé*) with a short wooden pestle (*ẓheṛen*). Manufactured from wood of *absef* (*Acacia Raddiana*) by a blacksmith of Tamanṛaset. Ahaggar, *Ɣarrata* of Taṛhawhawt. Dimension of the mortar: 0.230–0.235 m high, 0.170–0.180 m in diameter at the rim. Dimension of the pestle: 0.350 m long. (N.M. G. 5838a–b).

It is called *ẓkanef* and is baked in the following manner:— The millet flour is mixed with juice of *tadent*-berries (i.e., berries of *Boscia senegalensis*) and also with certain medicines unknown to my informants who said they were of Sudanese origin. This mixture is made into a solid dough with a very small content of water, and is baked in the sand where it is covered with hot sand, ashes, and embers in the same way as the bread type known as *tugella* (*tagella* in the north).

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Fig. 179. Simple saddle quern (*tehunt*) of two natural stones: (a) the lower part called *tehunt*, (b) the upper part called *azzed*. It is used for grinding cereals. Ahaggar, the *Aguh-en-tehlé* tribe. Dimension of the lower stone: 0.360 m long. Dimension of the upper stone: 0.115 m. (N.M. G. 5839a–b).

261 This *ékanef* bread is eaten exclusively by women who claim that it gives them a good appetite and makes them fat.

262 Millet porridge is a common dish among the Ahaggar Tuareg, and it constitutes by far the most important vegetable dish to the Ayr Tuareg and the sedentary agriculturists of the south. Millet 252 porridge is known in Ahaggar as *esink*, in Ayr as *echink*. The preparation of millet porridge involves much strenous work as follows:— (1) An amount of millet seeds is poured out into the large wooden mortar (*tindé*, p. 235, fig. 177). A little water is added to the seeds which are then pounded for about ten minutes. The seeds thus pounded are then poured out into a plaited bowl (*tabeyka*; Fig. 185) or another receptacle to be winnowed. This process is done by shaking the plaited bowl itself, and by pouring small quantities of the pounded seeds from the bowl into a plaited tray (*téseyt*; Fig. 184) which is better fitted for winnowing by shaking. The husks or pods covering the seeds are thus taken away by the wind. (2) When the pounded seeds have been cleaned or winnowed in this way they are replaced in the wooden mortar, and water is again added. The seeds are now heavily pounded for about half an hour, and most of them are turned into flour after this process, but a small amount of seeds remains unpounded. The mixture of flour and unpounded seeds are poured out into the plaited

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bowl and the plaited tray just described, and the flour is shaken into the large wooden bowl (*elkoda*; Fig. 195b) while the unpounded seeds remain in the plaited receptacles. (3) The small amount of seeds which have not yet been turned into flour is put back into the mortar, a little water is again added, and pounding is resumed for five to ten minutes. Most seeds are now turned into flour which is placed in the wooden bowl by shaking the plaited receptacles. (4) The seeds which are not yet pounded after this treatment are replaced in the mortar to be pounded for two or three minutes without the addition of water. The flour produced is shaken into the wooden bowl. (5) What remains unpounded is replaced in the mortar to be pounded without water for two or three minutes, and the flour obtained is shaken into the wooden bowl. (6) The flour is put into the large cooking pot (*érir*) which has been boiling with water during pounding. (7) An extremely small quantity of flour derived from a final pounding is added to the pot after cooking for about five minutes. (8) During cooking the porridge is stirred with a wooden stick known to the Ahaggar Tuareg as *aserwi* (Fig. 188).

Millet porridge (*esink*, or *echink*) is of heavy consistency and is normally eaten with milk by means of spoons. But if milk is lacking or is scarce, the Tuareg also add various types of sauces such as the following which is made by many Ayr Tuareg: — Leaves of certain plants (*abezey*, *Cassia tora*; *malokhiya*, *Corchorus tridens*; *kuka*, a large tree growing in the Sudan) or seeds of a plant known as *ékabewa* (*Corchorus olitorius*) are put into a large mortar to be pounded together with onions, dried tomatoes,

Fig. 180. Tuareg woman grinding wheat on the simple saddle quern (*tehaut*). The saddle quern is placed upon a piece of skin (leather) called *asenisi* which receives the flour. Ahaggar, the *Dag Rali* tribe.

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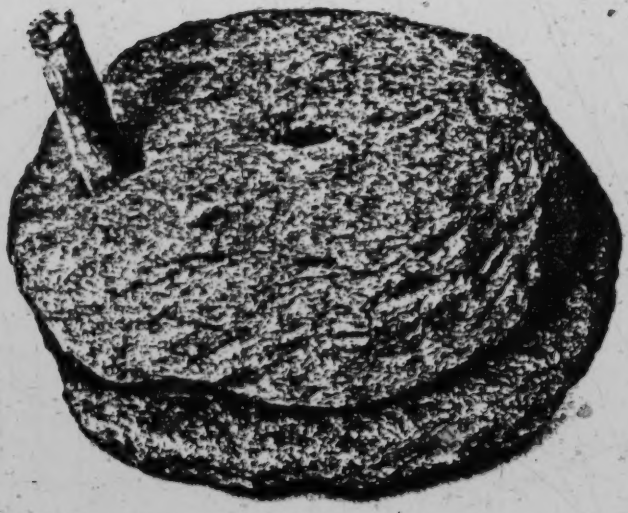

Fig. 181. A hand-mill (*tasirt*) manufactured by blacksmith of Tamanrasset and used at that village by *Ahl Azzi* Arabs. Dimension: 0.52 m in diameter (upper stone), 0.32 m in diameter (lower stone). (N.M. G. 5840a–b).

262 and red pepper which is much esteemed by the Tuareg, but not always available. The pounded flour
252 of these vegetables is boiled with water and butter and thus turned into a kind of thick sauce which is poured out over the porridge to be eaten.

The porridge type known as *esink* or *ehink* can be made from other seeds besides millet. Porridge made from barley, which is then also pounded in the mortar, is highly esteemed by the Tuareg who also use various wild seeds and roots for this dish. Plants utilized for porridge are mentioned above in the description of collecting (p. 175 ff). Porridge is also made from dried dates pounded in the millet mortar; this dish is common among the Northern Tuareg.

The Tuareg have a particular type of porridge which I have never tasted. It is known to the Ayr Tuareg as *barela*, and is made from pounded seeds of various cultivated plants (wheat, barley, maize, or millet). The seeds are pounded in the mortar but their husks or pods are not removed by winnowing. Otherwise the preparation of this dish is similar to that of ordinary porridge.

262 The Ahaggar Tuareg distinguish between very thick porridge called *tarewayt* and very thin porridge
846 or thick gruel known as *alhwa*. The latter dish is known to the Ayr Tuareg by the same name, and

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among them it is eaten in particular by women during the first seven days after the birth of a child, that is during the period from birth to the name-giving ceremony known as *isnawen*. It is considered dangerous for a woman to eat too much vegetable food during this period, while meat is believed to make her recover quickly after birth. The same diet is followed by young boys after their circumcision until their wounds have healed. These dietetic rules no doubt have their root in magical beliefs.

All Tuareg esteem liquid or semi-liquid dishes which are consumed mainly during the very hot season. A very common dish of this type is that named *agejira* (Ayr) or *agehara* (Ahaggar). It is made from flour of millet, sorghum, dates, and crushed cheese mixed with water, the main substance being pounded millet. The dish is served in a large wooden bowl or in a calabash, and is eaten and drunk by means of a large wooden ladle called *tamulat* (Fig. 194a–b). This liquid dish is a substitute for milk during the hot season when milk is scarce, and it is frequently used for food on journeys, in which case it is transported in the form of dough-like balls to be dissolved in water just before eating.

The terms *agejira* and *agehara* are used for various liquid or semi-liquid dishes, or beverages, for which the Tuareg have particular names according to their composition. Dates are less important for liquid dishes in Ayr than among the Northern Tuareg to whom dates form an important part of food. Very important in the north is a dish known as *talekessat*; it is made from dried dates pounded

Fig. 182. Tuareg women turning a hand-mill (*tasirt*). In the foreground a woman shaking flour into a wooden bowl. Note the ornamented patches of leather hanging down from the tent sheet. Ahaggar, the *Dag Rali* tribe.

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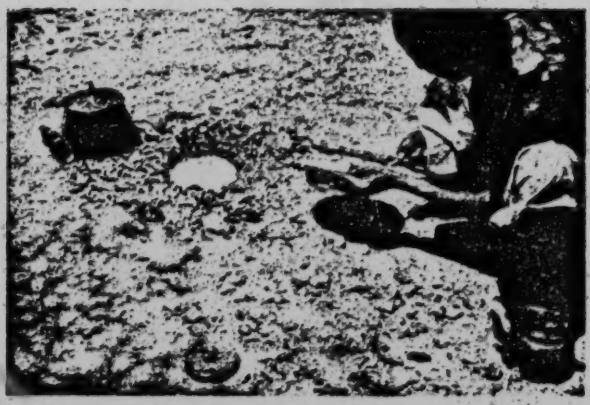

Fig. 183. Baking a *tafrilla* bread. The gruel-dough before it is covered with sand, ashes, and embers. Ahaggar, *Ahl Azzi* Arabs.

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Fig. 184. Plaited tray (*tézeyt*) which serves to winnow grain and flour but is used also for a cover of milk-bowls and eating bowls. Made according to the technique of coiled basketry by Tuareg woman. The plaiting material is straw of *tolegit* (*Juncus maritimus*). Ahaggar, the *Ajjeh-en-tehli* tribe. Dimension: 0.333–0.343 m in diameter. (N.M. G. 5834).

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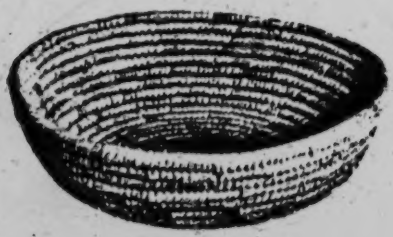

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Fig. 185. Tray or bowl *tabeyke* – perhaps not correctly spelled). It is used for winnowing, and it serves as an eating bowl and a drinking bowl as this container is watertight. Coiled basketry of date palm leaves (*afam*). Made by Tuareg woman. Ahaggar, the *Dag Rali* tribe. Dimension: 0.205 m in diameter. (F.M. 263).

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Fig. 186. Pot (*tulekkiet*) with a single handle. Manufactured by *Harratin* women in Ahaggar, the *Aguh-en-tehlé* tribe. Dimension: 0.18 m high. (F.M. 172).

in a mortar with a little water to a soft dough to which a little cheese, butter, or milk is added before eating. If a large quantity of milk is added this dish is known as *tarkit*. The Ahaggar Tuareg, as mentioned (p. 167), also pound dried dates with locusts to make a dish eaten by women who wish to grow fat.

The Arabs and the Arabic-speaking agriculturists of Tidikelt (the *Harratin*) have introduced among the Northern Tuareg the well-known North African dish generally called kuskus. The dish is known to the Tuareg as *keskesu* which is also Arabic by origin. But this dish is not the staple diet among the Northern Tuareg that it is among the Arabs and the Berbers of the Atlas. It is eaten mainly on festive occasions, and there are many Tuareg women who even to-day do not know how to prepare it. The *keskesu* dish is preferably made from wheat flour, though barley flour may also be used. The cereals are ground with hand-mills or quern stones (saddle querns), and the flour is rolled into very

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Fig. 187a–b. Earthen cooking pots manufactured by *Harratin* women in Ahaggar.
a. Pot (*tafirt*). Ahaggar, *Ahl Azzi* Arabs of Tamanrasset. Dimension: 0.210 m high. (N.M. G. 5841).
b. Pot (*alekkin*). Ahaggar, *Harratin* of Tajhawhawt. Dimension: 0.174 m high. (N.M. G. 5204).

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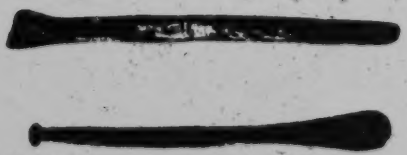

Fig. 188a–b. Simple ladles of the *aserwi* type used for stirring millet porridge. Made by Tuareg women from wood of *abaw* (*Acacia Raddiana*).
a. Ahaggar, the *Ajjah-en-tehli* tribe. Dimension: 0.382 m long. (N.M. G. 5211).
b. Ahaggar, the *Ikeyawen Hoda* tribe. Dimension: 0.415 m long. (N.M. G. 5846).

252 small balls with a diameter of up to five millimetres. The balls are put into a special earthen, wooden, or plaited bowl (*denba*, or *denfu*; Fig. 189) which has a number of small holes in the bottom. This receptacle is placed on the top of a cooking pot containing meat and/or vegetables to be boiled in water for a soup. The small flour balls are thus steamed by the boiling soup in the cooking pot. Like

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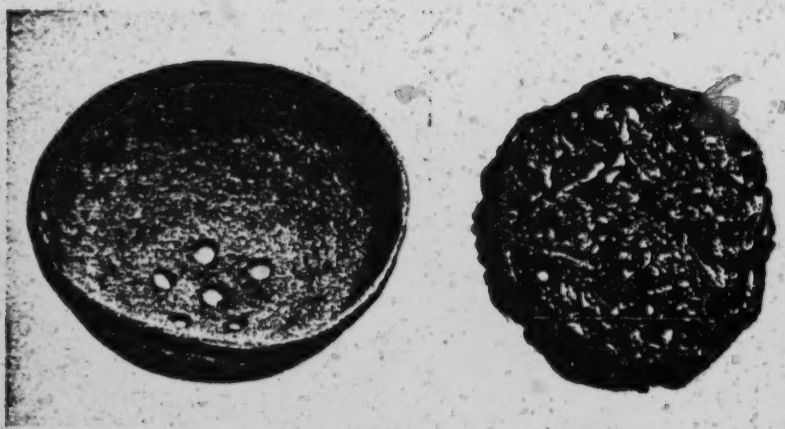

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Fig. 189. Earthen jar (*drufa*, or *dewha*) of the particular type used for the preparation of *keskesu*. Ahaggar, *Harratin* of Tamanrasset. Dimension: 0.16 m high, 0.30 m in diameter. (F.M. 215).

Fig. 190. A kind of cake (*tanfot*) made of onions and dates which are mixed and pressed. Such cakes are made in Tidikelt but are sold at Tamanrasset by Arab merchants. They are pounded in the mortar or are crushed between two stones before cooking. Dimension: 0.10 m. (N.M. G. 5847a).

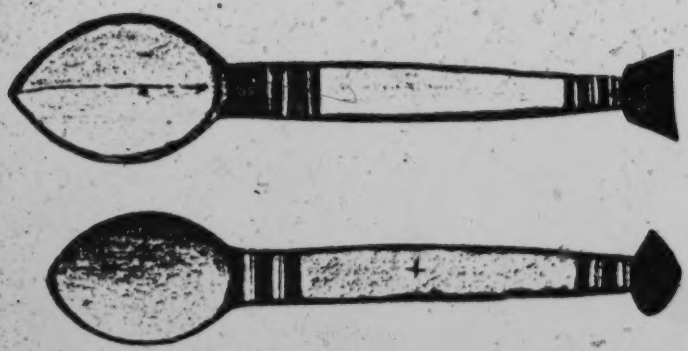

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Fig. 191. Wooden spoons (*tesukalt*, pl. *tisukalin*) cut by blacksmiths from wood of the *tabwak* tree (*Balanites aegyptiaca*). Ahaggar, the *Ajjah-en-tshil* and the *Dag Rali* tribes. Dimension: ca. 0.26–0.28 m. (F.M.).

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Fig. 192. Tuareg woman cooking millet porridge. Ahaggar, the *Aguh-en-tehli* tribe. The cooking pots seen on this photograph are bought in the Sudan on trading expeditions. Sudanese pots are superior to those made in Ahaggar.

most Tuareg dishes they are eaten from a large wooden bowl. If meat is cooked with the soup it may be broken into small pieces to be eaten with the balls, but part of the meat cooked is always eaten separately. The Tuareg eat *keskesu* with spoons, but if spoons are lacking they also eat it with the hand, as do the Arabs. In addition to *keskesu* with its small balls which resemble grains of rice, the Northern Tuareg have another dish prepared in the same way but with larger balls. It is termed *tikhemmezin* and is considered inferior to the *keskesu*. – Both these dishes are unknown to the Ayr Tuareg of the *Kel Ferwan* group.

Two particular dishes are mentioned from Ahaggar by Foucauld. One of them is called *iberĝan* and consists of unripe barley boiled in its own juice without water. The other one is known as *abezbez* and is made from tender plants of wheat and barley which are dried and pounded or ground into powder, to be eaten, boiled or unboiled, in periods of famine (Foucauld 1951–52, I, p. 89, 118).

Tuareg vegetable dishes are frequently prepared in a very simple way. Thus there is a dish known as *tuwa* (Ahaggar) or *tewa* (Ayr) which consists of entire seeds of millet or sorghum boiled in water. It is eaten mainly by children who frequently walk about the camp eating these boiled grains from their hands.

It is clear from the description of vegetable dishes that the cooking pot plays an important role for food preparation, and all dishes prepared in this way, including cooked meat, are known to the Tuareg

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as *tḍyist* (Ayr) or *talekkist* (Ahaggar). But pastoral Tuareg do not make earthenware pots themselves. They obtain them from sedentary people, and it is possible that vegetable dishes have been prepared with hot stones up to recent times, for Foucauld states that hot stones are occasionally used for various vegetable dishes in Ahaggar (Foucauld 1951-52, IV, p. 1583). However, I have not been able to confirm this during my own investigations among the Tuareg. It should be added that certain vegetable dishes are neither boiled nor baked. This is the case with seeds and roots of various wild plants which are ground and pounded into flour to be eaten without further preparation. Such dishes are known to the Tuareg as *tḍbik* (Ahaggar) or *tḍderka* (Ayr). Seeds and roots of wild plants utilized in this way have been mentioned in the chapter on collecting p. 175 ff.

The Tuareg have a great many different dishes, but in spite of this variety they do not always change their food from one day to another. They frequently live on the same type of food for extremely long periods. They may live almost exclusively on milk for weeks and even months, and if milk is not available they live so to speak exclusively on vegetable dishes, which may also not be changed for very long periods.

The Ahaggar Tuareg have three meals a day:— (1) *taǧimǧimt* which is a light meal taken in the morning. (2) *amakli* which is a prepared meal (e.g., bread, porridge, or *aṛehara*) eaten at midday. (3) *amaǧis* which is the evening meal, also known as *amensi*, or *azuẓeǧ*. It is the most important meal.

Fig. 193. Tuareg woman cooking kuskus (*kreksesu*) in an European enamelled pot. Ahaggar, the *Dag Ġali* tribe.